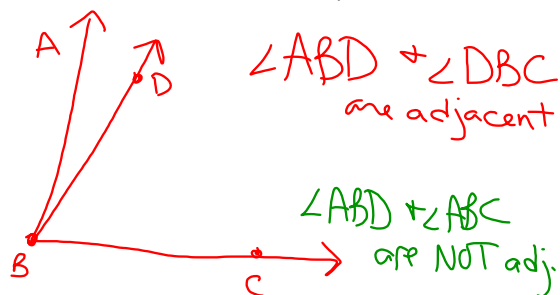
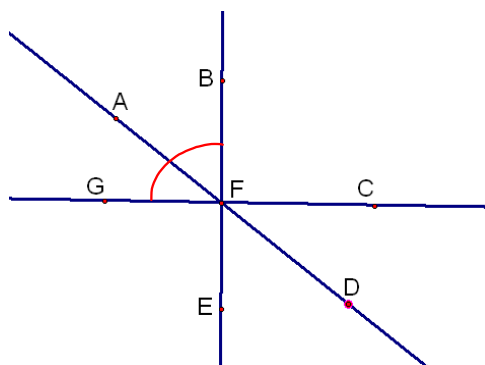
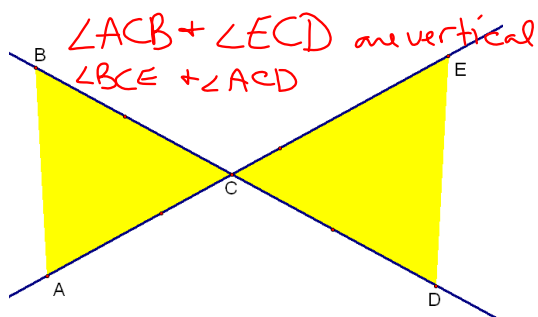


## 1-5 Angle Relationships

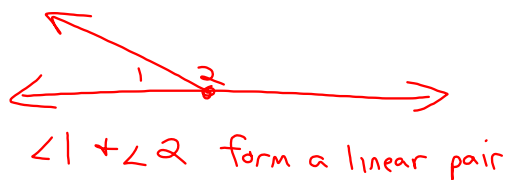
Adjacent angles—2  $\angle$ s that lie in the same plane, have a common vertex, and a common side, but no common interior points



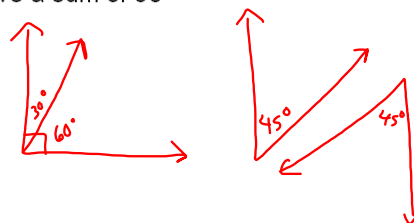
Vertical angles—2 nonadjacent  $\angle$ s formed by intersecting lines



Linear pair—a pair of adjacent  $\angle$ s whose non-common sides are opposite rays



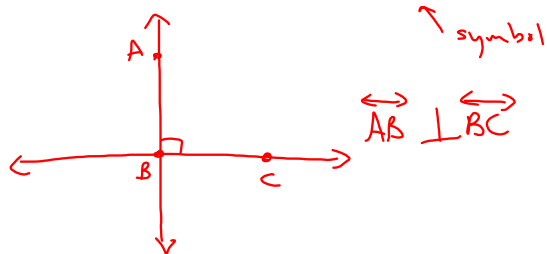
Complementary angles—2  $\angle$ s whose measures have a sum of  $90^\circ$



Supplementary angles—2  $\angle$ s whose measures have a sum of  $180^\circ$



Perpendicular lines—lines that form right  $\angle$ s; form congruent adjacent  $\angle$ s ( $\perp$ )



## Example 1

- \* An angle is  $6^\circ$  less than twice its complement.  
Find the angles.

$$\begin{aligned} \begin{cases} x + y = 90 \\ x = 2y - 6 \end{cases} \\ 2y - 6 + y = 90 \\ 3y - 6 = 90 \\ 3y = 96 \\ \boxed{\begin{aligned} y &= 32^\circ \\ x &= 58^\circ \end{aligned}} \end{aligned}$$

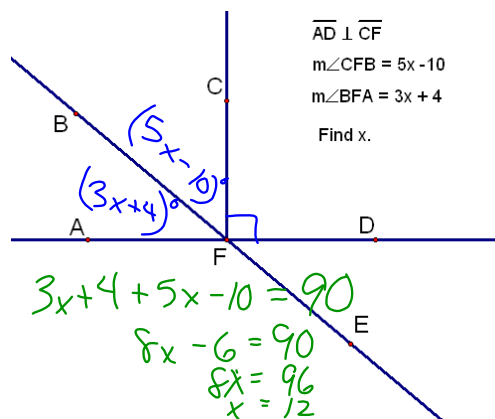
## Example 2

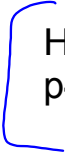
- An angle is  $44^\circ$  more than its supplement. Find the angles.

$$\begin{aligned} x + y &= 180 \\ x &= 44 + y \\ 44 + y + y &= 180 \\ 2y &= 136 \\ y &= 68^\circ \quad x = 112^\circ \end{aligned}$$

- Example 3 Two angles are complementary.  
An angle is 17 times as large as the other. Find the angles.

$$\begin{aligned} x + y &= 90 \\ x &= 17y \end{aligned}$$





HW  
p42 #s 11-17,20-28